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FILE COVERS 1971 TO PATENT PUBLICATION DATE: 6 Jun 2006 (20060606/PD)
FILE LAST UPDATED: 6 Jun 2006 (20060606/ED)
HIGHEST GRANTED PATENT NUMBER: US7058980
HIGHEST APPLICATION PUBLICATION NUMBER: US2006117448
CA INDEXING IS CURRENT THROUGH 6 Jun 2006 (20060606/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 6 Jun 2006 (20060606/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2006
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2006

=> e nichols/in NICHOLLS WILLIAM J/IN 1 NICHOLOULIAS MICHAEL/IN E2 3 0 --> NICHOLS/IN E3 1 NICHOLS ADAM ROSS/IN E4 2 E5 NICHOLS ALAN/IN 1 NICHOLS ALBERT D/IN E6 5 NICHOLS ALFRED C/IN E7 1 1 2 NICHOLS ALLEN D/IN E8 NICHOLS AMON/IN E9 NICHOLS AMY MARIE/IN E10 NICHOLS ANDREW J/IN NICHOLS ANDREW JOHN/IN 1 E11 3 E12

=> e spear james/ex

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### => e spear/ex

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=> s e4 and e5

1 "NICHOLS ADAM ROSS"/IN

2 "NICHOLS ALAN"/IN

L1 0 "NICHOLS ADAM ROSS"/IN AND "NICHOLS ALAN"/IN

=> s e4

L2 1 "NICHOLS ADAM ROSS"/IN

=> s e5

L3 2 "NICHOLS ALAN"/IN

=> s e4 and e5

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PASSWORD:

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                 "Ask CAS" for self-help around the clock
                Pre-1988 INPI data added to MARPAT
NEWS 3
NEWS 4 FEB 21 STN AnaVist, Version 1.1, lets you share your STN AnaVist
                visualization results
NEWS 5 FEB 22
                The IPC thesaurus added to additional patent databases on STN
NEWS 6 FEB 22 Updates in EPFULL; IPC 8 enhancements added
NEWS 7 FEB 27 New STN AnaVist pricing effective March 1, 2006
NEWS 8 MAR 03 Updates in PATDPA; addition of IPC 8 data without attributes
NEWS 9 MAR 22 EMBASE is now updated on a daily basis
NEWS 10 APR 03
                New IPC 8 fields and IPC thesaurus added to PATDPAFULL
NEWS 11 APR 03
                Bibliographic data updates resume; new IPC 8 fields and IPC
                thesaurus added in PCTFULL
NEWS 12 APR 04
                STN AnaVist $500 visualization usage credit offered
NEWS 13 APR 12
                LINSPEC, learning database for INSPEC, reloaded and enhanced
NEWS 14 APR 12
                Improved structure highlighting in FQHIT and QHIT display
                in MARPAT
NEWS 15 APR 12
                Derwent World Patents Index to be reloaded and enhanced during
                second quarter; strategies may be affected
                CA/CAplus enhanced with 1900-1906 U.S. patent records
NEWS 16 MAY 10
NEWS 17 MAY 11
                KOREAPAT updates resume
NEWS 18 MAY 19
                Derwent World Patents Index to be reloaded and enhanced
NEWS 19 MAY 30 IPC 8 Rolled-up Core codes added to CA/CAplus and
                USPATFULL/USPAT2
NEWS 20 MAY 30
                The F-Term thesaurus is now available in CA/CAplus
NEWS 21 JUN 02
                The first reclassification of IPC codes now complete in
                INPADOC
NEWS EXPRESS
                FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
                CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0jc(jp),
                AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
                V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
                http://download.cas.org/express/v8.0-Discover/
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1 "NICHOLS ADAM ROSS"/IN

2 "NICHOLS ALAN"/IN

L4 0 "NICHOLS ADAM ROSS"/IN AND "NICHOLS ALAN"/IN

=> d 12 ibib abs

L2 ANSWER 1 OF 1 USPATFULL on STN

ACCESSION NUMBER: 2000:49625 USPATFULL

TITLE: Non-resealable, snap-fitted closure

INVENTOR(S): Schwartz, John Joseph, Cincinnati, OH, United States

Oder, Reuben Earl, Union, KY, United States Johnston, James Pyott, Merchtem, Belgium Nichols, Adam Ross, Cincinnati, OH, United

States

PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United

States (U.S. corporation)

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Jacyna, J. Casimer

LEGAL REPRESENTATIVE: Vago, James C., Koch, Elizabeth M.

NUMBER OF CLAIMS: 5 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 4 Drawing Figure(s); 3 Drawing Page(s)

LINE COUNT: 266

An non-resealable, snap-fitted closure comprises a closure, a drop ring and a container. The closure has a sleeve with a sleeve snap. The drop ring has an internal snap and an external snap wherein the internal snap engages the sleeve snap of the closure when the closure engages the drop ring. The container has a neck and a neck snap, wherein the neck snap and the internal snap of the drop ring engage when the closure and the drop ring engage the neck. The neck snap of the neck and the internal snap of the drop ring are an order of magnitude stronger than the sleeve snap of the sleeve and the external snap of the drop ring. When the closure is removed from the neck, the drop ring remains attached to the neck and is free to move vertically up and down along the neck, thereby preventing reattachment of the closure to the container.

#### => d his

(FILE 'HOME' ENTERED AT 14:02:16 ON 06 JUN 2006)

FILE 'USPATFULL' ENTERED AT 14:02:30 ON 06 JUN 2006

E NICHOLS/IN

L1 0 S E4 AND E5

L2 1 S E4 L3 2 S E5

L4 0 S E4 AND E5

=> d 13 1-2

L3 ANSWER 1 OF 2 USPATFULL on STN

AN 92:54976 USPATFULL TI Portable air pump

IN Nichols, Alan, 210 Park St., Copiague, NY, United States 11726

```
Kupferberg, Eric, 15 Commonwealth Ave., Massapequa, NY, United States
       11758
PΙ
      US 5127808
                              19920707
AΙ
      US 1991-640904
                              19910114 (7)
DT
      Utility
      Granted
FS
LN.CNT 228
      INCLM: 417/411.000
INCL
       INCLS: 417/234.000
      NCLM: 417/411.000
NCL
      NCLS: 417/234.000
IC
       [5]
              F04B017-00
       ICM
       IPCI
             F04B0017-00 [ICM,5]
              B62J0011-00 [I,A]; B62J0011-00 [I,C*]; F04B0033-00 [I,A];
       IPCR
              F04B0033-00 [I,C*]; F04B0035-00 [I,C*]; F04B0035-04 [I,A]
       417/411; 417/234
EXF
     ANSWER 2 OF 2 USPATFULL on STN
1.3
       90:88722 USPATFULL
AN
ΤI
       Tuffnut (bicycle wheel mounting assembly)
      Nichols, Alan, 230 Park St., Copiague, NY, United States
IN
       11726
       Kupferberg, Eric, 230 Park St., Copiague, NY, United States 11726
                              19901120
PΤ
      US 4971397
      US 1989-356469
                               19890525 (7)
ΑI
DT
      Utility
       Granted
FS
LN.CNT 245
INCL
       INCLM: 301/105.000B
       INCLS: 301/111.000
      NCLM: 301/110.500
NCL
      NCLS: 301/124.200
       [5]
IC
       ICM
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              B60B0027-06 [ICM,5]; B60B0027-00 [ICM,5,C*]
       IPCI
              B62K0019-00 [I,C*]; B62K0019-30 [I,A]; B62K0025-00 [I,C*];
       IPCR
              B62K0025-02 [I,A]
       301/105B; 301/111; 301/114; 301/115; 301/124R; 411/272; 411/273; 411/432
EXF
=> s e6
             1 "NICHOLS ALBERT D"/IN
L5
=> d ibib abs
     ANSWER 1 OF 1 USPATFULL on STN
ACCESSION NUMBER:
                        86:58619 USPATFULL
                        Meat product press apparatus
TITLE:
                        Nichols, Albert D., 1505 East Graber,
INVENTOR(S):
                        Wichita, KS, United States 67216
                        Nichols, Raymond C., 1201 Luther, Wichita, KS, United
                        States 67216
                                         KIND
                            NUMBER
                                                 DATE
                        ______
PATENT INFORMATION:
                        US 4617859
                                                19861021
APPLICATION INFO.:
                        US 1985-752533
                                                19850708
                                                         (6)
DOCUMENT TYPE:
                        Utility
FILE SEGMENT:
                        Granted
                        Wilhite, Billy J.
PRIMARY EXAMINER:
                        Rein, Phillip A.
LEGAL REPRESENTATIVE:
```

NUMBER OF CLAIMS:

12

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

9 Drawing Figure(s); 2 Drawing Page(s)

LINE COUNT:

394

AB

This invention relates to a meat product press apparatus adapted to hold and compress ham members or the like during a meat packing plant processing procedures. The meat product press apparatus includes a lower press assembly interconnected by a main clamp assembly to a top press assembly. The lower and top press assemblies provide grate or grid type structures presented in spaced, parallel planes to clamp the meat product therebetween. The main clamp assembly includes an initial bias lock assembly to interconnect adjacent ends of the lower and top press assemblies and a pressure bias lock assembly to interconnect the spaced, opposite adjacent ends of the lower and top press assemblies. The initial bias lock assembly includes a pair of spaced spring members which are connectable to a cam lock member. The pressure bias lock assembly includes spring members each having one end connected to the lower press assembly and a top end connected to an upper cam lock member and having a handle cam lock member secured to the spring members engagable with the upper cam lock member. The handle cam lock member is operable to engage the upper cam lock member and operable to move the upper cam lock member into a locked position to hold the cam lock member and the handle cam lock member in the clamped condition.

=> s e7

L6

5 "NICHOLS ALFRED C"/IN

=> d 1-5 ibib abs

ANSWER 1 OF 5 USPATFULL on STN

1999:69792 USPATFULL

ACCESSION NUMBER: TITLE:

Quinolinic acid derivatives

INVENTOR(S):

Nichols, Alfred C., 111 West Oak Hill Dr.,

Florence, AL, United States 35633

Yielding, K. Lemone, 511 Woodland Dr., Tuscumbia, AL,

United States 35674

NUMBER KIND DATE

PATENT INFORMATION:

\_\_\_\_\_ US 5914403

APPLICATION INFO.:

19990622 19980624 (9) US 1998-103963

RELATED APPLN. INFO.:

Division of Ser. No. US 1997-887627, filed on 3 Jul

1997, now patented, Pat. No. US 5783700

DOCUMENT TYPE:

Utility Granted

FILE SEGMENT:

PRIMARY EXAMINER:

Morris, Patricia L.

LEGAL REPRESENTATIVE:

Bush, Kenneth M. Veal & Associates

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

746

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Coupled to the N-methyl-D-aspartate (NMDA) receptor complex is a strychnine-insensitive binding site for glycine. Pharmacological antagonism of glycine at this site may produce anticonvulsant activity. Twelve 4-urea-5,7-dichlorokynurenic acid derivatives were synthesized and subsequently screened in mice for anticonvulsant activity using MES, Met, and TTE tests, and a rotorod test was used to determine neurotoxicity. Seven of the derivatives had anticonvulsant activity in TTE testing at 100 mg/kg. One derivative had an ED.sub.50 value of 134 mg/kg in TTE testing. Two derivatives had MES activity. Only one

derivative was neurotoxic in the rotorod test. Compounds were screened at a 10 uM concentration for activity in displacing 5,7dichlorokynurenic acid from synaptosomal membrane fragments. Nine of the twelve compounds synthesized and tested have demonstrated anticonvulsant activity. Thus, compounds of the present invention should be usable for the treatment of epilepsy, neurodegenerative diseases, and other syndromes involving inhibition or excessive stimulation of the NMDA receptor complex.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 2 OF 5 USPATFULL on STN L6

ACCESSION NUMBER: 1998:86066 USPATFULL TITLE: Quinolic acid derivatives

INVENTOR(S): Nichols, Alfred C., 111 West Oak Hill Dr.,

Florence, AL, United States 35633

Yielding, K. Lemone, 511 Woodland Dr., Tuscumbia, AL,

United States 35674

NUMBER KIND DATE -----PATENT INFORMATION: APPLICATION INFO.: US 5783700 19980721 US 1997-887627 19970703 (8) DOCUMENT TYPE: Utility

FILE SEGMENT: Granted
PRIMARY EXAMINER: Morris, Patricia L.

LEGAL REPRESENTATIVE: Ken Bush, Veal & Associates

NUMBER OF CLAIMS: EXEMPLARY CLAIM: 828 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Coupled to the N-methyl-D-aspartate (NMDA) receptor complex is a strychnine-insensitive binding site for glycine. Pharmacological antagonism of glycine at this site may produce anticonvulsant activity. Twelve 4-urea-5,7-dichlorokynurenic acid derivatives were synthesized and subsequently screened in mice for anticonvulsant activity using MES, Met, and TTE tests, and a rotorod test was used to determine neurotoxicity. Seven of the derivatives had anticonvulsant activity in TTE testing at 100 mg/kg. One derivative had an ED.sub.50 value of 134 mg/kg in TTE testing. Two derivatives had MES activity. Only one derivative was neurotoxic in the rotorod test. Compounds were screened at a 10 uM concentration for activity in displacing 5,7dichlorokynurenic acid from synaptosomal membrane fragments. Nine of the twelve compounds synthesized and tested have demonstrated anticonvulsant activity. Thus, compounds of the present invention should be usable for the treatment of epilepsy, neurodegenerative diseases, and other syndromes involving inhibition or excessive stimulation of the NMDA receptor complex.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 3 OF 5 USPATFULL on STN

ACCESSION NUMBER: 96:14925 USPATFULL

TITLE: Anticonvulsive agents and uses thereof INVENTOR(S): Nichols, Alfred C., San Jose, TX, United

States

Yielding, K. Lemone, Galveston, TX, United States Board of Regents, the University of Texas System,

PATENT ASSIGNEE(S): Austin, TX, United States (U.S. corporation)

> NUMBER KIND DATE -----

PATENT INFORMATION:

US 5493027 19960220

APPLICATION INFO.:

US 1993-6918 19930122 (8)

DOCUMENT TYPE: FILE SEGMENT:

Utility Granted

PRIMARY EXAMINER:

Rothman, Alan L.

ASSISTANT EXAMINER:

Mach, D. Margaret M. Arnold, White & Durkee

LEGAL REPRESENTATIVE: NUMBER OF CLAIMS:

2

EXEMPLARY CLAIM: NUMBER OF DRAWINGS:

3 Drawing Figure(s); 3 Drawing Page(s)

LINE COUNT:

1019

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Coupled to the N-methyl-D-aspartate (NMDA) receptor-channel complex is a strychnine-insensitive binding site for glycine. Pharmacological antagonism of glycine binding at this site can produce anticonvulsant activity. Derivatives of kynurenic acid, pyridine and 2-carboxy-indole were synthesized and evaluated as antagonists of glycine binding and for anticonvulsant effects. Compounds were tested in mice against seizures induced by electroshock and pentylenetetrazole, and in the rotorod assay for neurologic deficit. The derivatives were also assayed for binding at the NMDA-associated glycine site. The most potent anticonvulsant was ethyl 4-methylamino-5,7-dichloro-2-quinoline carboxylate. This compound provided protection against maximal electroshock (MES) induced seizures at a dose of 30 mg/kg. Other compounds were active at 100 mg/kg dose level, including 5-fluoro-2-indole carboxylic acid and the diethyl ester of 2,6-pyridine dicarboxylic acid.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 4 OF 5 USPATFULL on STN

ACCESSION NUMBER:

94:77808 USPATFULL

TITLE:

4-hydroxyquinaldic acid derivatives

INVENTOR(S):

Nichols, Alfred C., Texas City, TX, United

Yielding, K. Lemone, Galveston, TX, United States

Board of Regents, University of Texas, United States PATENT ASSIGNEE(S):

(U.S. corporation)

NUMBER KIND DATE ----- -----

PATENT INFORMATION:

US 5344922

19940906

APPLICATION INFO.:

US 1992-938546

19920828 (7)

DISCLAIMER DATE:

20080702

RELATED APPLN. INFO.:

Continuation of Ser. No. US 1991-645900, filed on 25 Jan 1991, now abandoned which is a continuation of Ser. No. US 1989-439652, filed on 20 Nov 1989, now patented,

Pat. No. US 5028707, issued on 2 Jul 1992

DOCUMENT TYPE:

Utility

FILE SEGMENT:

Granted

PRIMARY EXAMINER: LEGAL REPRESENTATIVE:

Springer, David B. Arnold, White & Durkee

NUMBER OF CLAIMS:

11

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

6 Drawing Figure(s); 5 Drawing Page(s)

LINE COUNT:

613

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A 7-chloro-4-hydroxy-2-quinoline carbonyl azide and its use as a photoaffinity probe for the N-methyl-D-aspartate (NMDA) receptor complex on neurons are claimed. A number of other compounds, including 4-hydroxy-2-quinoline carbonyl azides, isocyanates, and amides are also provided. Purification and characterization of the NMDA receptor is described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 5 OF 5 USPATFULL on STN

ACCESSION NUMBER: 91:52646 USPATFULL

TITLE: 4-hydroxyquinaldic acid derivatives

INVENTOR(S): Nichols, Alfred C., Texas City, TX, United

States

Yielding, K. Lemone, Galveston, TX, United States
PATENT ASSIGNEE(S): Board of Regents, University of Texas, Austin, TX,

United States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 5028707 19910702

APPLICATION INFO.: US 1989-439652 19891120 (7)

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Raymond, Richard L. ASSISTANT EXAMINER: Treanor, Susan P.

LEGAL REPRESENTATIVE: Arnold, White, & Durkee NUMBER OF CLAIMS: 17

NUMBER OF CLAIMS: 17 EXEMPLARY CLAIM: 3,4,13

NUMBER OF DRAWINGS: 6 Drawing Figure(s); 5 Drawing Page(s)

LINE COUNT: 590

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A 7-chloro-4-hydroxy-2-quinoline carbonyl azide and its use as a photoaffinity probe for the N-methyl-D-aspartate (NMDA) receptor complex on neurons are claimed. A number of other compounds, including 4-hydroxy-2-quinoline carbonyl azides, isocyanates, and amides are also provided. Purification and characterization of the NMDA receptor is described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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Left, right, and simultaneous left and right truncation is available in the Basic Index.

Definition

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Application Country
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CAS Registry Numbers (CA data)
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Classification Code (CA data)
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Controlled Term (CA data)
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Current National Patent Classification Code
Current Secondary National Patent Classification /NCLS
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Inventor Address, State
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Inventor Address, ZIP code
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IPC Action Date
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IPC (Formar IC, ICM, ICS)
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IPC Initial Classification
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IPC Keyword Text
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IPC, Secondary (1)
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                                                  /SGR
IPC Subgroup Range Searchable
IPC Version
                                                  /IPC.VER
IPC Versions (1-8)
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Issue Main National Patent Classification
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Patent Country
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Patent Number
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Patent Kind
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                                                  /PRC
Priority Country
Priority Date
                                                  /PRD
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Priority Number (1) /PRN /PRY Priority Year /PD Publication Date /PY Publication Year Reference Non-Patent Information /REN /RPCL Reference Patent Classification /RPC Reference Patent Country /RPIN Reference Patent Inventor /RPIC Reference Patent IPC Reference Patent Number /RPN Reference Patent Publication Date /RPD /RPY Reference Patent Publication Year Related Application Country /RLC Related Application Date /RLD Related Application Number /RLN Related Application Year /RLY Related Patent Number /RLPN Related Patent Publication Year /RLPY Related Publication Indicator /RLP Section Cross-reference (CA data) /sx Supplementary Term (CA data) /ST Term of Patent /PTERM Title /TI Update Date /UP Update Date of CA Indexing /UPCA

 US provisional priority numbers are searched only with a P appended, e.g., US1999-121903P/PRN.

You may also use super search fields to execute a search in more than one field:

Search Field Name	Super Search Code	Fields Searched
International Patent Classifications (1,2)	/IPC	All IPC code fields
Patent Application Group	/APPS	/AP, /PRN, /RLN
Patent Country Group	/PCS	/PC, /RPC, /FC
Patent Number Group	/PATS	/PN, /FN, /RPN, /RLPN

- (1) This field contains the classifications and catchwords for all IPC classification subject headings and subheadings from the current (8th) and previous editions of the WIPO International Patent Classifications (IPC) manual. To search the codes for a specific edition (1-8) of the IPC manual, use the field code followed by the edition number, e.g., /IC2, ICM2, /ICS2 for the 2nd edition.
- (2) RXPAND and SELECT work with this field.

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Date (/RLD), Related Patent Publication Year (/RLPY), Related Application Year (/RLY), Reference Patent Publication Date (/RPD), Reference Patent Publication Year (/RPY), IPC Subgroup Range Searchable (/SGR), Update Date (/UP), and Update Date of CA Indexing (/UPCA which are numeric and may be searched with numeric operators or ranges, e.g., PY>1992.

International Patent Classification (/IPC), International Patent Classification, Main (/ICM), International Patent Classification, Secondary (/ICS), IPC Initial Classification (/IPCI), IPC Reclassification (/IPCR), National Patent Classification, Issue (/INCL), National Patent Classification, Issue, Main (/INCLM), National Patent Classification, Issue, Secondary (/INCLS), National Patent Classification, Current, (/NCL), National Patent Classification, Current, Main (/NCLM), and National Patent Classification, Current, Secondary (/NCLS) are range-searchable in the International Patent Classification or USPTO Manual of Classification order. However, these fields are not numeric fields and may not be searched using numeric operators.

Search and display fields generally have the same field codes. To see a list of display fields, enter HELP DFIELDS at an arrow prompt (=>).

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E2
            5
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E3
           13 --> SPEAR JAMES/EXNAM
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                       1998:101414 USPATFULL
TITLE:
                       Osmotic-delivery devices having vapor-permeable
                        coatings
                       Herbig, Scott M., Deschutes, OR, United States
INVENTOR(S):
                       Miller, Eric J., Mount Pleasant, WI, United States
                       S. C. Johnson & Son, Inc., Racine, WI, United States
PATENT ASSIGNEE(S):
                        (U.S. corporation)
                            NUMBER
                                       KIND DATE
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US 1995-489888 19950613 (8)

19980825

US 5798119

Utility

PATENT INFORMATION:

APPLICATION INFO.: DOCUMENT TYPE:

FILE SEGMENT: Granted

PRIMARY EXAMINER: Page, Thurman K. ASSISTANT EXAMINER: Spear, James M.

NUMBER OF CLAIMS: 42 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 5 Drawing Figure(s); 3 Drawing Page(s)

LINE COUNT: 997

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

An osmotic device that, following the imbibition water vapor, provides for the controlled release of a beneficial agent to a non-aqueous environment. The device comprises a hydrophilic formulation and a beneficial agent, surrounded by a wall. The wall is formed at least in part of a semipermeable hydrophobic microporous membrane having an average pores size between about 0.1  $\mu m$  and 30  $\mu m$ . The pores are substantially filled with a gas phase. The hydrophobic membrane is permeable to water in the vapor phase and the hydrophobic membrane is impermeable to an aqueous medium at a pressure less than about 100 Pa. The beneficial agent is released, for example, by osmotic pumping or osmotic bursting upon imbibition of sufficient water vapor into the hydrophilic formulation. The high water fluxes attendant with these vapor-permeable hydrophobic membranes facilitate the delivery of large quantities of beneficial agents without requiring large surface areas (quantities) of hydrophobic microporous membrane. In addition, use of vapor-permeable hydrophobic microporous membranes allow osmotic devices to be used in environments having limited water availability, such as air or soil.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 2 OF 4 USPATFULL on STN

ACCESSION NUMBER: 93:52346 USPATFULL TITLE: Analgesic compositions

INVENTOR(S): Nichols, Larry D., Arlington, MA, United States PATENT ASSIGNEE(S): Purepac, Inc., Elizabeth, NJ, United States (U.S.

corporation)

NUMBER KIND DATE
US 5223267 19930629
US 1992-869107 19920414 (7)

APPLICATION INFO.: US 1992-869107 19920414 (7)
RELATED APPLN. INFO.: Continuation of Ser. No. US 1990-619485, filed on 29
Nov 1990, now abandoned which is a continuation-in-part
of Ser. No. US 1989-358690, filed on 30 May 1989, now

patented, Pat. No. US 5000947

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Page, Thurman K. ASSISTANT EXAMINER: Spear, James M.

LEGAL REPRESENTATIVE: Engellenner, Thomas J., Maslow, James E.

NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1
LINE COUNT: 342

PATENT INFORMATION:

Liquefiable powder compositions are disclosed for the delivery of topical analgesics. In particular, microporous cellulosic powders, such as cellulose acetates or nitrates, are disclosed as high liquid content vehicles for the delivery of liquid analgesic preparations. The resulting powders permit the application of the analgesic preparation by simply rubbing or otherwise applying the formulation onto the skin in such a manner that the powder liquefies and appears to vanish. Upon application, the frangible liquid loaded cellulosic powders break up into minute particles that do not pass easily beyond the initial layers of the skin, but do permit the slow release of the analgesic agent for

absorption into the skin.

L8 ANSWER 3 OF 4 USPATFULL on STN

ACCESSION NUMBER: 93:37559 USPATFULL TITLE: Sunscreen composition

INVENTOR(S): Nichols, Larry D., Arlington, MA, United States
PATENT ASSIGNEE(S): Moleculon, Inc., Elizabeth, NJ, United States (U.S.

corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 5209923 19930511
APPLICATION INFO:: US 1992-869105 19920414 (7)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1990-619737, filed on 29

Nov 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-358690, filed on 30 May 1989, now

patented, Pat. No. US 5000947

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Page, Thurman K. ASSISTANT EXAMINER: Spear, James M.

LEGAL REPRESENTATIVE: Engellenner, Thomas J., Maslow, James E.

NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
LINE COUNT: 268

Liquefiable powder compositions are disclosed for the delivery of topical sunscreens. In particular, microporous cellulosic powders, such as cellulose acetates or nitrates, are disclosed as high liquid content vehicles for the delivery of liquid sunscreen preparations dissolved or dispersed in a liquid carrier. The resulting powders permit the application of the sunscreen preparation by simply rubbing or otherwise applying the formulation onto the skin in such a manner that the powder liquefies and appears to vanish. Upon application, the frangible liquid loaded cellulosic powders break up into minute particles that adhere well to the skin and do not pass easily beyond the initial layers of the skin, but do permit the slow release of the sunscreen agent.

L8 ANSWER 4 OF 4 USPATFULL on STN

ACCESSION NUMBER: 93:33275 USPATFULL

TITLE: Soap compositions containing liquid-loaded powders INVENTOR(S): Nichols, Larry D., Arlington, MA, United States PATENT ASSIGNEE(S): Moleculon, Inc., Elizabeth, NJ, United States (U.S.

corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 5206019 19930427 APPLICATION INFO.: US 1992-869108 19920414 (7)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1990-619729, filed on 29
Nov 1990, now abandoned which is a continuation-in-part
of Ser. No. US 1989-358690, filed on 30 May 1989, now

patented, Pat. No. US 5000947

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Page, Thurman K. ASSISTANT EXAMINER: Spear, James M.

LEGAL REPRESENTATIVE: Engellenner, Thomas J., Maslow, James E.

NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
LINE COUNT: 186

AB Soap compositions for topical delivery of Personal care agents are disclosed. The compositions include a soap formulation and a frangible, liquid-loaded, cellulosic powder which is blended with the soap to form the composition. The porous cellulosic powder provides a vehicle for increasing the liquid payload of a soap without diminishing its hardness or durability.

L9 1 L8 AND ANTIPERSPIRANT?

=> d 1 ibib abs

L9 ANSWER 1 OF 1 USPATFULL on STN

ACCESSION NUMBER: 93:33275 USPATFULL

TITLE: Soap compositions containing liquid-loaded powders INVENTOR(S): Nichols, Larry D., Arlington, MA, United States PATENT ASSIGNEE(S): Moleculon, Inc., Elizabeth, NJ, United States (U.S.

corporation)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1990-619729, filed on 29

Nov 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-358690, filed on 30 May 1989, now

patented, Pat. No. US 5000947

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Page, Thurman K. ASSISTANT EXAMINER: Spear, James M.

LEGAL REPRESENTATIVE: Engellenner, Thomas J., Maslow, James E.

NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
LINE COUNT: 186

AB Soap compositions for topical delivery of Personal care agents are disclosed. The compositions include a soap formulation and a frangible, liquid-loaded, cellulosic powder which is blended with the soap to form the composition. The porous cellulosic powder provides a vehicle for increasing the liquid payload of a soap without diminishing its hardness

or durability.

=> e nichols larry/inv

'INV' IS NOT A VALID EXPAND FIELD CODE FOR FILE 'USPATFULL' The indicated field code is not available for EXPAND in this file. To see a list of valid EXPAND field codes, enter HELP SFIELDS at an arrow prompt (=>).

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                   NICHOLS LADD/IN
E2
             1
             0 --> NICHOLS LARRY/IN
E3
E4
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                 NICHOLS LARRY D/IN
                   NICHOLS LARRY L/IN
E5
             2
                   NICHOLS LARSEN DEBORAH S/IN
E6
             1
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E7 1 NICHOLS LAURA L/IN
E8 1 NICHOLS LAWRENCE/IN

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10/632,407
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E9 15 NICHOLS LAWRENCE J/IN
E10 11 NICHOLS LAWRENCE R/IN
E11 1 NICHOLS LAWRENCE W/IN
E12 1 NICHOLS LAWSON C/IN

=> s e4 and e5

20 "NICHOLS LARRY D"/IN 2 "NICHOLS LARRY L"/IN

L10 0 "NICHOLS LARRY D"/IN AND "NICHOLS LARRY L"/IN

=> s e4

L11 20 "NICHOLS LARRY D"/IN

=> s l11 and antipersirant?
 8 ANTIPERSIRANT?

L12 0 L11 AND ANTIPERSIRANT?

=> s e5

L13 2 "NICHOLS LARRY L"/IN

=> s antiperspirant?

L14 3761 ANTIPERSPIRANT?

=> s l14 and l11

L15 6 L14 AND L11

=> s cellulos?

L16 278368 CELLULOS?

=> s l16 and l15

L17 6 L16 AND L15

=> d 1-6 ibib abs

L17 ANSWER 1 OF 6 USPATFULL on STN

ACCESSION NUMBER: 94:17811 USPATFULL

TITLE: Lotions containing liquid-loaded powder INVENTOR(S): Nichols, Larry D., Arlington, MA, United

States

PATENT ASSIGNEE(S): Purepac, Inc., Elizabeth, NJ, United States (U.S.

corporation)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1990-619728, filed on 29
Nov 1990, now abandoned which is a continuation-in-part
of Ser. No. US 1989-358690, filed on 30 May 1989, now
patented, Pat. No. US 5000947, issued on 19 Mar 1991

(7)

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Page, Thurman K. ASSISTANT EXAMINER: Gardner, Sally

LEGAL REPRESENTATIVE: Engellenner, Thomas J.

NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
LINE COUNT: 352

AB An emulsifier-free lotion suspension of at least one liquid in another liquid, the lotion having high intrinsic stability. The lotion is prepared by combining microscopic particles of soft, porous, frangible polymer material containing at least a first liquid with a second liquid

in free form. The amount of free liquid is sufficient to achieve a creamy texture without allowing bouyant movement of the particles. The softness of the particles is sufficient to enable the lotion to leave essentially no visible residue when rubbed onto the skin. The polymer material preferably takes the form of a microporous cellulosic powder.

L17 ANSWER 2 OF 6 USPATFULL on STN

ACCESSION NUMBER: 93:37567 USPATFULL TITLE: Foot care compositions

INVENTOR(S): Nichols, Larry D., Arlington, MA, United

States

PATENT ASSIGNEE(S): Moleculon, Inc., Elizabeth, NJ, United States (U.S.

corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 5209932 19930511 APPLICATION INFO.: US 1992-875197 19920424 (7)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1990-619727, filed on 29

Nov 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-358690, filed on 30 May 1989, now

patented, Pat. No. US 5000947

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Page, Thurman K.

ASSISTANT EXAMINER: Levy, Neil

LEGAL REPRESENTATIVE: Engellenner, Thomas J., Maslow, James E.

NUMBER OF CLAIMS: 15 EXEMPLARY CLAIM: 1 LINE COUNT: 315

AB Liquefiable and porous powder compositions are disclosed for the delivery of topical foot-care preparations. In particular, microporous cellulosic powders, such as cellulose acetates or nitrates, are disclosed as high liquid-content vehicles for the delivery

of foot-care preparations. The resulting powders permit the application of the foot-care preparation by simply rubbing or otherwise applying the formulation onto the skin in such a manner that the powder liquefies and appears to vanish. Upon application, the frangible liquid-loaded cellulosic powders break up into minute particles that do not

pass easily beyond the initial layers of the skin, but do permit the slow release of the foot-care preparation for absorption into the skin.

L17 ANSWER 3 OF 6 USPATFULL on STN

ACCESSION NUMBER: 93:33278 USPATFULL

TITLE: Insect repellent compositions

INVENTOR(S): Nichols, Larry D., Arlington, MA, United

States

PATENT ASSIGNEE(S): Moleculon, Inc., Elizabeth, NJ, United States (U.S.

corporation)

PATENT INFORMATION: US 5206022 19930427 APPLICATION INFO.: US 1992-875198 19920424 (7)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1990-619721, filed on 29
Nov 1990, now abandoned which is a continuation-in-part

of Ser. No. US 1989-358690, filed on 30 May 1989, now patented, Pat. No. US 5000947

DOCUMENT TYPE: Utility

FILE SEGMENT: Granted

PRIMARY EXAMINER: Page, Thurman K.

ASSISTANT EXAMINER: Levy, Neil

LEGAL REPRESENTATIVE: Engellenner, Thomas J., Maslow, James E.

NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1
LINE COUNT: 240

Liquefiable powder compositions are disclosed for the delivery of topical insect repellents. In particular, microporous cellulosic powders, such as cellulose acetates or nitrates, are disclosed as high liquid content vehicles for the delivery of liquid insect or tick repellent preparations. The resulting powders permit the application of the arthropod repellent preparation by simply rubbing or brushing the formulation onto the skin, in such a manner that the powder liquefies and appears to vanish. Upon application, the frangible, liquid loaded cellulosic powders break up into minute particles that

do not pass easily beyond the initial layers of the skin, but do permit the slow release of the insect repellent agent.

L17 ANSWER 4 OF 6 USPATFULL on STN

ACCESSION NUMBER: 93:33275 USPATFULL

TITLE: Soap compositions containing liquid-loaded powders

INVENTOR(S): Nichols, Larry D., Arlington, MA, United

States

PATENT ASSIGNEE(S): Moleculon, Inc., Elizabeth, NJ, United States (U.S.

corporation)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1990-619729, filed on 29
Nov 1990, now abandoned which is a continuation-in-part

of Ser. No. US 1989-358690, filed on 30 May 1989, now

patented, Pat. No. US 5000947

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Page, Thurman K. ASSISTANT EXAMINER: Spear, James M.

LEGAL REPRESENTATIVE: Engellenner, Thomas J., Maslow, James E.

NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
LINE COUNT: 186

AB Soap compositions for topical delivery of Personal care agents are disclosed. The compositions include a soap formulation and a frangible,

liquid-loaded, cellulosic powder which is blended with the soap to form the composition. The porous cellulosic powder

provides a vehicle for increasing the liquid payload of a soap without

diminishing its hardness or durability.

L17 ANSWER 5 OF 6 USPATFULL on STN

ACCESSION NUMBER: 91:22461 USPATFULL

TITLE: Shaped articles containing liquefiable powders for delivery of cosmetic and other personal care agents

INVENTOR(S): Nichols, Larry D., Arlington, MA, United

States

PATENT ASSIGNEE(S): Moleculon, Inc., Elizabeth, NJ, United States (U.S.

corporation)

NUMBER KIND DATE

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PATENT INFORMATION: US 5000947 19910319
APPLICATION INFO.: US 1989-358690 19890530 (7)

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Page, Thurman K.
ASSISTANT EXAMINER: Rucker, Susan S.
LEGAL REPRESENTATIVE: Engellenner, Thomas J.

NUMBER OF CLAIMS: 44
EXEMPLARY CLAIM: 1
LINE COUNT: 626

AB Shaped articles, such as cakes, sticks and other compacts, formulated with liquefiable powders containing various agents are disclosed for the delivery of cosmetic and other personal care products. In particular, microporous cellulosic powders, such a cellulose

triacetate (CTA), are disclosed as high liquid content vehicles for the active agents. The liquefiable powders can be compacted to form firm cakes or formulated with binders to yield sticks. The resulting shaped articles are neither oily nor gritty and yet permit the application of the cosmetic or personal care agents by simply rubbing or brushing the formulation onto the skin, in such a manner that the powder liquefies and appears to vanish. Shaped articles made in accordance with the present invention permit the delivery of high concentrations of active agents without the problems normally associated with liquids and oils.

L17 ANSWER 6 OF 6 USPATFULL on STN

ACCESSION NUMBER: 76:55313 USPATFULL

TITLE: Controlled release materials and method of use

INVENTOR(S): Nichols, Larry D., Arlington, MA, United

States

PATENT ASSIGNEE(S): Moleculon Research Corporation, Cambridge, MA, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 3985298 19761012

APPLICATION INFO:: US 1974-519812 19741101 (5)

RELATED ADDIM INFO

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1974-518797, filed on 29 Oct 1974, now Defensive Publication No. which is

a continuation-in-part of Ser. No. US 1973-363267,

filed on 23 May 1973, now patented, Pat. No. US 3846404

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Lusignan, Michael R. ASSISTANT EXAMINER: Konopacki, Dennis C. LEGAL REPRESENTATIVE: Crowley, Richard P.

NUMBER OF CLAIMS: 20 EXEMPLARY CLAIM: 1,20 LINE COUNT: 451

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for the controlled release of a substance which comprises impregnating a substance to be released into and within a cellulosic polymer-liquid composite material as a part of or all of the liquid phase, and the controlled release material as produced.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> s capsule?

L18 154480 CAPSULE?

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=> s 117 and 118
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=> s wax
L20 105090 WAX
=> s colorant?
       67584 COLORANT?
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     (FILE 'HOME' ENTERED AT 14:02:16 ON 06 JUN 2006)
     FILE 'USPATFULL' ENTERED AT 14:02:30 ON 06 JUN 2006
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L1
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             1 S E4
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             2 S E5
             0 S E4 AND E5
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             1 S E6
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            5 S E7
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              E SPEAR JAMES/EXNAM
L7
           916 S E5
            4 S L7 AND NICHOLS
L8
            1 S L8 AND ANTIPERSPIRANT?
L9
              E NICHOLS LARRY/IN
            0 S E4 AND E5
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L11
           20 S E4
L12
            0 S L11 AND ANTIPERSIRANT?
            2 S E5
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         3761 S ANTIPERSPIRANT?
L14
L15
            6 S L14 AND L11
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       278368 S CELLULOS?
            6 S L16 AND L15
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L18
        154480 S CAPSULE?
L19
            0 S L17 AND L18
L20
       105090 S WAX
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        67584 S COLORANT?
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           3 L17 AND L20
=> s 122 and 121
            3 L22 AND L21
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L23 ANSWER 1 OF 3 USPATFULL on STN
ACCESSION NUMBER:
                      93:37567 USPATFULL
                       Foot care compositions
TITLE:
INVENTOR(S):
                      Nichols, Larry D., Arlington, MA, United
                      States
PATENT ASSIGNEE(S):
                      Moleculon, Inc., Elizabeth, NJ, United States (U.S.
                      corporation)
                          NUMBER
                                      KIND DATE
                       -----
PATENT INFORMATION:
                      US 5209932
                                             19930511
                      US 1992-875197
APPLICATION INFO.:
                                            19920424 (7)
                      Continuation of Ser. No. US 1990-619727, filed on 29
RELATED APPLN. INFO.:
                      Nov 1990, now abandoned which is a continuation-in-part
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of Ser. No. US 1989-358690, filed on 30 May 1989, now

10/632,407

patented, Pat. No. US 5000947

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Page, Thurman K. ASSISTANT EXAMINER: Levy, Neil

LEGAL REPRESENTATIVE: Engellenner, Thomas J., Maslow, James E.

NUMBER OF CLAIMS: 15
EXEMPLARY CLAIM: 1
LINE COUNT: 315

Liquefiable and porous powder compositions are disclosed for the delivery of topical foot-care preparations. In particular, microporous cellulosic powders, such as cellulose acetates or nitrates, are disclosed as high liquid-content vehicles for the delivery of foot-care preparations. The resulting powders permit the application of the foot-care preparation by simply rubbing or otherwise applying the formulation onto the skin in such a manner that the powder liquefies and appears to vanish. Upon application, the frangible liquid-loaded cellulosic powders break up into minute particles that do not pass easily beyond the initial layers of the skin, but do permit the slow release of the foot-care preparation for absorption into the skin.

L23 ANSWER 2 OF 3 USPATFULL on STN

ACCESSION NUMBER: 93:33278 USPATFULL

TITLE: Insect repellent compositions

INVENTOR(S): Nichols, Larry D., Arlington, MA, United

States

PATENT ASSIGNEE(S): Moleculon, Inc., Elizabeth, NJ, United States (U.S.

corporation)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1990-619721, filed on 29

Nov 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-358690, filed on 30 May 1989, now

patented, Pat. No. US 5000947

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Page, Thurman K.

ASSISTANT EXAMINER: Levy, Neil

LEGAL REPRESENTATIVE: Engellenner, Thomas J., Maslow, James E.

NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1
LINE COUNT: 240

AB Liquefiable powder compositions are disclosed for the delivery of topical insect repellents. In particular, microporous cellulosic powders, such as cellulose acetates or nitrates, are disclosed as high liquid content vehicles for the delivery of liquid insect or tick repellent preparations. The resulting powders permit the application of the arthropod repellent preparation by simply rubbing or brushing the formulation onto the skin, in such a manner that the powder liquefies and appears to vanish. Upon application, the frangible, liquid loaded cellulosic powders break up into minute particles that do not pass easily beyond the initial layers of the skin, but do permit the slow release of the insect repellent agent.

L23 ANSWER 3 OF 3 USPATFULL on STN

ACCESSION NUMBER: 91:22461 USPATFULL

TITLE: Shaped articles containing liquefiable powders for

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10/632,407
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154480 S CAPSULE?
L18
             0 S L17 AND L18
L19
        105090 S WAX
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        67584 S COLORANT?
L21
L22
             3 S L17 AND L20
L23
              3 S L22 AND L21
                               5,587,153
              1 S US5000947/PN
L24
=> s 124 and 116
L25
            1 L24 AND L16
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     ANSWER I OF 1 DSPATFULL ON STN
       US 5000947
                              19910319
PΤ
               liquefiable powders containing various agents are disclosed for
AB
       the delivery of cosmetic and other personal care products. In
       particular, microporous cellulosic powders, such a
       cellulose triacetate (CTA), are disclosed as high liquid content
       vehicles for the active agents. The liquefiable powders can be compacted
SUMM
            . invention is cosmetic and personal care compositions and, in
      particular, the formulation of cakes, sticks and other shaped articles
       from cellulosic powders containing liquid payloads.
               liquefiable powders containing various agents are disclosed for
SUMM
       the delivery of cosmetic and other personal care products. In
       particular, microporous cellulosic powders, such as
       cellulose triacetate (CTA), are disclosed as high liquid content
       vehicles for the active agents. The liquefiable powders can be compacted
       In one aspect of the invention, it has been discovered that
SUMM
       cellulosic powders containing liquid payloads of personal care
       products can be compacted to packing densities ranging from about 55
       percent to. . . Such compacted cakes can be obtained by applying a
       pressure ranging from about 50 to about 80 PSI to a cellulosic
       powder which has been appropriately loaded with a liquid payload of the
       active agent. In the absence of other additives,.
SUMM
       Powders and other forms of microporous cellulosic compounds,
       as well as the utility of such materials in the conveyance and delivery
       of liquid payloads, are described in the U.S. Pat. Nos. 3,846,404 and
       3,985,298, herein incorporated by reference. Cellulosic
       powders and the like can be formed with liquid payloads by a coagulative
       technique, as described in U.S. Pat. No..
       In one technique, the liquefiable powders are formed by dissolving a
SUMM
       cellulosic polymer and a pore-forming liquid in a volatile,
       polar solvent (e.g., a low molecular weight ester or diester) and then
       dispersively evaporating the solution, for example, by spray drying.
       Suitable volatile solvents for cellulosic polymers include
       methylene chloride, acetone, ethyl acetate, ethyl carbonate, methyl
       formate and the like. Methylene chloride is a preferred solvent when the
       cellulosic polymer is cellulose triacetate.
       Alternatively, other less volatile solvents, such as formic acid or the
       like, can be used and the resulting solution. .
       The cellulosic powders useful in the present invention can
SUMM
       range from about one to about 500 microns in average diameter,
                        . . ranging in size from about 10 to about 5000
      preferably from.
       Angstroms and capable of holding liquid payloads of active agents. The
       cellulosic powder can be formed from cellulosic
      polymers chosen from the group of cellulose acetates,
       cellulose butyrates, cellulose nitrates,
       cellulose propionates, ethyl celluloses and discrete
```

or molecular mixtures thereof. One preferred cellulosic powder

is a polymeric powder of **cellulose** triacetate, having a (dry) acetyl content greater than about 42 percent. The liquid content of the **cellulosic** powders of the present invention can range from about 50 percent to about 95 percent by weight. What is claimed is:

CLM

- . A shaped article for delivery of a personal care agent, the shaped article comprising a compacted formulation of a liquefiable, cellulosic powder, the liquid content of the powder ranging from about 50 percent to about 95 percent liquid and containing a. . . 2. The shaped article of claim 1 wherein the cellulosic powder is a polymeric powder chosen from the group consisting of cellulose acetates, cellulose butyrates, cellulose nitrates, cellulose propionates, ethyl celluloses and discrete and molecular mixtures thereof.
- 3. The shaped article of claim 1 wherein the **cellulosic** powder is a **cellulose** triacetate polymeric powder.
- . . of formulating shaped articles for topical delivery of a personal care agent, the method comprising: preparing a solution comprising a cellulosic polymer in a volatile solvent, and a miscible pore-forming liquid; forming a liquefiable powder from said solution by elimination of. . .
  - . 22. The method of claim 21 wherein the step of preparing a solution further includes preparing a solution comprising a cellulosic polymer chosen from the group selected from cellulose acetates, a cellulose butyrates, cellulose nitrates, cellulose propionates, ethyl celluloses and discrete or molecular mixture.
    - 23. The method of claim 21 wherein the step of preparing a solution further includes preparing a solution comprising cellulose triacetate.
- . . . 35. A shaped article for delivery of a personal care agent, the shaped article comprising a formulation of a liquefiable, cellulosic powder, the liquid content of the powder ranging from about 50 percent to about 75 percent and containing a personal. . 36. The shaped article of claim 35 wherein the cellulosic powder is a polymeric powder chosen from the group consisting of cellulose acetates, cellulose butyrates, cellulose nitrates, cellulose propionates, ethyl celluloses and discrete and molecular mixtures thereof.
  - 37. The shaped article of claim 35 wherein the **cellulosic** powder is a **cellulose** triacetate polymeric powder.
- . . of formulating shaped articles for topical delivery of a personal care agent, the method comprising: preparing a solution comprising a cellulosic polymer in a volatile solvent, and a miscible pore-forming liquid; forming a liquefiable powder from said solution by elimination of. . . of a liquid phase containing the personal care agent for an initial liquid phase after powder formation; compounding the liquefiable, cellulosic powder containing a personal care agent with a binding agent; and shaping the resulting formulation by application of pressure to. . .

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L4

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SUMM

US 5000947

### (FILE 'HOME' ENTERED AT 14:02:16 ON 06 JUN 2006) FILE 'USPATFULL' ENTERED AT 14:02:30 ON 06 JUN 2006 E NICHOLS/IN 0 S E4 AND E5 1 S E4 2 S E5 0 S E4 AND E5 1 S E6 5 S E7 E SPEAR JAMES/EXNAM 916 S E5 4 S L7 AND NICHOLS 1 S L8 AND ANTIPERSPIRANT? E NICHOLS LARRY/IN 0 S E4 AND E5 T.10 L11 20 S E4 L12 0 S L11 AND ANTIPERSIRANT? L13 2 S E5 3761 S ANTIPERSPIRANT? L14 L15 6 S L14 AND L11 L16 278368 S CELLULOS? L17 6 S L16 AND L15 L18 154480 S CAPSULE? L19 0 S L17 AND L18 L20 105090 S WAX 67584 S COLORANT? L21 L22 3 S L17 AND L20 L23 3 S L22 AND L21 1 S US5000947/PN L24 L25 1 S L24 AND L16 L26 1875169 S SIZE => s 123 and 126 3 L23 AND L26 L27 => s 124 and 126 1 L24 AND L26 L28 => d kwic L28 ANSWER 1 OF 1 USPATFULL on STN 19910319 US 5000947 . . diameter, and typically are roughly microspherical in shape. SUMM They are further characterized by being microporous with interconnecting pores ranging in size from about 10 to about 5000 Angstroms and capable of holding liquid payloads of active agents. The cellulosic powder can. => s diameter and 124 1290910 DIAMETER 1 DIAMETER AND L24 => d kwic L29 ANSWER 1 OF 1 USPATFULL on STN

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about one to about 500 microns in average diameter, preferably from about 5 to about 100 microns in average diameter, and

The cellulosic powders useful in the present invention can range from

- typically are roughly microspherical in shape. They are further characterized by being microporous with interconnecting pores ranging in size.
- DETD . . . fully dispersed. This solution was sprayed at 1000 PSI from a 0.0135" nozzle downward into a tower 100 cm in diameter and 300 cm tall through which 1250 liters per minute of solvent-free air was passing from top to bottom.
- DETD No grittiness was observed during this experiment; the mean particle diameter was about 30 microns, and particles larger than 150 microns were not observed. This evaporative process produced smaller particles than. . . spray into smaller initial droplets, and the evaporation of the methylene chloride from these droplets led to further reduction in diameter.
- DETD . . . solution was pumped at 1000 PSI through a 0.0135" nozzle directed downward into a pool of methanol 100 cm in diameter and 10 cm deep, located 100 cm below the nozzle. Approximately 1 kg of polymer solution was sprayed, and the. . .
- DETD . . . area was washed after six hours. A slight grittiness was observed during application to the skin. Although the mean particle diameter was about 60 microns, occasional particles larger than 150 microns existed and could be felt as grit.
- DETD The second method of fill used circular 35 mm diameter plastic petri dishes as an aid to filling. A measured weight of powder was placed in the dish and uniformly. . .
- DETD . . . pressure is also a practical method of control. The receptacles were plastic compacts, having a smooth-walled cavity 44 mm in diameter and a flush-filled volume of 15 cc. An aluminum cylinder was machined with a smooth face and a loose fitting diameter of 44 mm. The cavity was filled with the powder of Example 1, the cylinder placed on top and a. . . CLM What is claimed is:
- 4. The shaped article of claim 1 wherein the powder further comprises particles ranging in average **diameter** from about 1 to about 500 microns.
  - 5. The shaped article of claim 1 wherein the powder further comprises particles ranging in average **diameter** from about 5 to about 100 microns.
  - 38. The shaped article of claim 35 wherein the powder further comprises particles ranging in average **diameter** from about 1 to about 500 microns.
  - 39. The shaped article of claim 35 wherein the powder further comprises particles ranging in average **diameter** from about 5 to about 150 microns.